

LEGISLATIVE COUNCIL
PANEL ON PLANNING, LANDS AND WORKS

PWP Item 657CL -
Demolition of buildings, structures and chimneys
at Kwai Chung Incineration Plant

PURPOSE

This paper seeks Members' support to the Administration's proposal to upgrade **657CL** "Demolition of buildings, structures and chimneys at Kwai Chung Incineration Plant" to Category A to carry out the demolition and ground decontamination works at the Kwai Chung Incineration Plant (KCIP).

PROJECT SCOPE AND NATURE

2. The scope of works under **657CL** comprises -
- (a) removal, treatment and disposal of asbestos-containing materials (ACM) and dioxin-containing materials (DCM) in existing structures;
 - (b) demolition and removal of the main incineration plant, a 150m tall chimney and various ancillary structures;
 - (c) ground decontamination works including on-site treatment, confirmatory ground investigation and testing;
 - (d) earthworks including temporary works, excavation works, disposal of soil contaminated with hydrocarbons to designated landfill and reinstatement of site;
 - (e) drainage works; and
 - (f) implementation of environmental mitigation, monitoring and audit for the proposed works mentioned in sub-paragraphs (a) to (e) above.

— A site plan for the proposed works is at **Enclosure 1**.

3. We plan to commence the proposed works in October 2007 for completion in October 2012.

JUSTIFICATION

4. In accordance with the 1989 White Paper on “Pollution in Hong Kong – A Time to Act”, the municipal solid waste incinerators in Hong Kong have been closed in phases, and replaced by a system of transfer stations feeding large landfill sites. The KCIP ceased to operate in May 1997.

5. As revealed from the Environmental Impact Assessment (EIA) and the subsequent site investigation, the buildings, structures and chimneys at the KCIP site are contaminated with ACM and/or DCM. The underground soil is contaminated with heavy metals and hydrocarbons. In accordance with the Environmental Permit issued by the Director of Environmental Protection, remediation of the site should be carried out before permanent future development of the site.

FINANCIAL IMPLICATIONS

6. We estimate the capital cost of the project to be \$191.0 million in MOD prices (see paragraph 9 below), made up as follows –

| | \$ million |
|--|-------------------|
| Demolition Work: | |
| (a) Removal of ACM and DCM | 9.0 |
| (b) Demolition of building structures and chimneys | 26.0 |
| | <hr/> |
| | Sub-total 35.0 |
| Decontamination Work: | |
| (c) Ground decontamination works | 61.5 |
| (d) Earthworks | 40.0 |
| | <hr/> |
| | Sub-total 101.5 |
| (e) Drainage works | 0.3 |

| | | |
|--|-----------|-----------------------------|
| (f) Environmental mitigation measures | 3.0 | |
| (g) Consultants' fees | 29.4 | |
| (i) construction supervision and contract administration | 1.0 | |
| (ii) resident site staff costs | 26.6 | |
| (iii) EM&A programme | 1.8 | |
| (g) Contingencies | 15.5 | |
| | <hr/> | |
| | Sub-total | 184.7 (in Sep. 2006 prices) |
| (h) Provision for price adjustment | 6.3 | |
| | <hr/> | |
| | Total | 191.0 (in MOD prices) |

7. No annual recurrent expenditure is required for this project.

PUBLIC CONSULTATION

8. We consulted the Planning and Environmental Hygiene Committee of the K&TDC on 17 April 2007. Members had no objection to the proposed project and strongly demanded the Government to commence the project as soon as possible.

ENVIRONMENTAL IMPLICATIONS

9. The project is a designated project under Schedule 2 of the Environmental Impact Assessment (EIA) Ordinance (Cap. 499) and an environmental permit (EP) is required for the project. The EIA report was approved by the Environmental Protection Department (EPD) in January 2002 and it concluded that the environmental impacts of the project could be controlled to within the criteria under the EIA Ordinance and the Technical Memorandum on EIA Process.

10. An EP was issued by EPD on 1 March 2002. We will implement the measures recommended in the approved EIA report. We estimate the cost of implementing the environmental monitoring and mitigation measures to be \$3.0 million (in September 2006 prices). We have included this cost in the overall project estimate.

11. During construction, we will control noise, dust, site surface runoff nuisances and chemical waste treatment to within established standards and guidelines through the implementation of mitigation measures in the contract. We will also implement an EM&A programme to ensure timely and effective implementation of the recommended mitigation measures.

12. We have considered suitable measures including selective demolition and on-site sorting at the planning and design stages to reduce the generation of construction and demolition (C&D) materials and to reuse/recycle such materials as much as possible. In addition, we will require the contractor to reuse inert C&D materials on site, in order to minimize the disposal of C&D materials to public fill reception facilities. We will encourage the contractor to maximize the use of recycled or recyclable C&D materials, as well as the use of non-timber formwork to further minimize the generation of construction waste.

13. We will require the Contractor to submit, as required under the EP, waste management plans (WMP) for approval. The WMP will include appropriate reduction, remediation, treatment and disposal methods and plans, and mitigation measures to avoid, reduce, reuse and recycle all types of contaminated soils and wastes, and C&D materials in order to ensure the volume of waste to be disposed of at Designated Waste Disposal Facilities to the best practicable minimum quantity and environmentally acceptable quality. We will ensure that the day-to-day operations on site comply with the approved WMP. We will control the disposal of public fill and C&D waste to public fill reception facilities and landfills respectively through a trip-ticket system. We will require the contractor to separate public fill from C&D waste for disposal at appropriate facilities. We will record the disposal, reuse and recycling of C&D materials for monitoring purposes.

14. We estimate that the project will generate about 33 000 tonnes (t) of C&D materials from demolition works. Of these, we will recycle 8 500 t (26%) for other uses, deliver about 14 500 t (44%) to public fill reception facilities¹ for subsequent reuse and about 10 000 t (30%) to landfills. The total cost for accommodating C&D materials at public fill reception facilities and landfill sites is estimated to be about \$1.6 million for this project (based on an unit cost of \$27/tonne for disposal at public fill reception facilities and

1 Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of public fill in public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

\$125/tonne² at landfills).

LAND ACQUISITION

15. The proposed works do not require any land acquisition as all areas within the site are Government land.

BACKGROUND

16. We upgraded **657CL** to Category B in September 2005.

17. In September 1999, we engaged consultants to carry out the EIA study and site investigation works. We have charged the cost of \$1.63 million to block allocation **Subhead 5101CX** “civil engineering related works, studies and investigations for items in Category D of the Public Works Programme”.

18. We employed consultants to carry out the review, design, tender and construction phases in July 2002. We have charged the cost of \$4.52 million to block allocation **Subhead 5101CX** “civil engineering related works, studies and investigations for items in Category D of the Public Works Programme”.

19. The proposed demolition and ground decontamination works at Kwai Chung Incineration Plant Site will involve the removal of 42 trees by felling. All trees to be removed are not important trees³ in which all of them are either adhering to the disused structures or with roots being contaminated.

² This estimate has taken into account the cost for developing, operating and restoring the landfills after they are filled and the aftercare required. It does not include the land opportunity cost for existing landfill sites (which is estimated at \$90/m³), nor the cost to provide new landfills (which are likely to be more expensive) when the existing ones are filled. The notional cost estimate is for reference only and does not form part of this project estimate.

³ An “important tree” refers to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria:-

- trees of 100 years old or above;
- trees of cultural, historical or memorable significance e.g. Fung Shui tree, tree as landmark of monastery or heritage monument, and trees in memory of an important person or event;
- trees of precious or rare species;
- trees of outstanding form (taking account of overall tree sizes, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or
- trees with trunk diameter equal or exceeding 1.0 metre (measured at 1.3 metre above ground level), or with height/canopy spread equal or exceeding 25 m.

20. We estimate that the proposed works will create about 134 jobs (110 for labourers and another 24 for professional/technical staff) providing a total employment of 3 300 man-months.

WAY FORWARD

21. We plan to seek the Public Works Sub-committee's endorsement for upgrading the proposed works to Category A in June 2007. Subject to Members' endorsement, we will seek funding approval from the Public Works Sub-Committee and Finance Committee of the Legislative Council in June and July 2007 respectively for upgrading **657CL** to Category A so that the works can commence in October 2007 for completion by October 2012.

ATTACHMENT

Enclosure 1 Kwai Chung Incineration Plant Site Layout Plan

Environment, Transport and Works Bureau
May 2007

LEGEND : 圖例

--- SITE BOUNDARY
地盤邊界

WORKS SITE
地盤範圍

ENCLOSURE 1 附件一

823800 N

829800 E



PROPOSED SITE
地盤位置

RAMBLER CHANNEL
藍巴葛海峽

KWAI CHUNG PARK
葵涌公園

TSING CHAU
青洲

位置圖 LOCATION PLAN
比例 SCALE 1 : 5000

823600 N

830000 E

政府輪船處理中心

前葵涌焚化爐
KWAI CHUNG
INCINERATION PLANT
(GLA NO. TW 36)

渠務署葵涌基本污水處理廠
DRAINAGE SERVICES DEPARTMENT
KWAI CHUNG PRELIMINARY
TREATMENT WORKS



土木工程拓展署
CIVIL ENGINEERING
AND DEVELOPMENT
DEPARTMENT
PWP item no. 5657CL Demolition of buildings,
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5657CL號工程計劃葵涌焚化爐建築物、構築物和煙囪拆卸及除污工程



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TITLE

KWAI CHUNG INCINERATION PLANT SITE LAYOUT PLAN
前葵涌焚化爐工地圖

SCALE 比例

1 : 2000

DRAWING no. 圖則編號

KCIP004